IBW AT INDIAN SCHOOL ROAD
FCD GAGE ID# 4618

STATION DESCRIPTION

LOCATION – The gage is located at the Indian School Road low flow crossing of Indian Bend Wash, just west of Hayden Road. The gage is located on the west bank of the wash with the instrumentation located just to the right of the v-notch in the weir. Latitude 33° 29' 42.3" N, Longitude 111° 54' 40.3" W. Located in the SE1/4 SE1/4 S23 T2N R4E of the Tempe 7.5-minute quadrangle.

ESTABLISHMENT – The gage was installed November 25, 1997.

DRAINAGE AREA – 90 mi^2

GAGE – The gage is a pressure transducer type instrument located on the right bank of the low flow channel, approximately 150 feet upstream from the weir at Indian School Road. Elevation 0.72 feet gage height, levels of April 15, 2010.

There is no staff gage at this location.

There is one crest-stage gage at this location. It is located right of the notch in the weir. The pin elevation is 1.65 feet gage height, levels of March 31, 2004.

ZERO GAGE HEIGHT – Zero gage height is defined as the low point (bottom) of the v-notch in the weir. Since the datum shifted -0.70 feet, the bottom of the v-notch weir is now -0.70 feet gage height. Zero elevation is 1,233.19 feet NAVD 1988, levels of April 15, 2010. Previously, zero elevation was defined as 1,233.89 feet NAVD 1988.

HISTORY – Gaging established on November 25, 1997. The PT was moved back toward the right bank on June 22, 2000 to get away from the effects of the notch in the weir during low flow events. A crest-stage gage was installed on June 22, 2000. Gage removed for construction on November 30, 2009. Gage reinstalled about 150 upstream of original location on February 16, 2010. Gage datum shifted -0.70 feet.

REFERENCE MARKS –

RM-IBWISR is an FCD brass cap located on the south side of Indian School Road near the townhomes. The RM was established in November 2000. Elevation 3.52 feet gage height, or 1,238.15 feet NAVD 1988. Northing 907447.097 feet; Easting 701577.780 feet.

RP1 is a '+' chiseled in the upstream end of the left (east) wingwall and painted white. It is at elevation 5.07 feet gage height, levels of April 15, 2010.

RP2 is the white painted top of the pipe that holds the safety cable on the right bank. It is at elevation 7.00 feet gage height, levels of March 31, 2004.

CHANNEL AND CONTROL – The channel upstream of the weir is a grassy trapezoidal channel. Channel control prevails.

RATING – The current rating is Rating #2. The rating replaced the weir rating when the weir location was abandoned for a location about 150 feet upstream. The rating was developed from channel geometry and slope and application of the Manning equation.

DISCHARGE MEASUREMTNES – Discharge measurements could be made in the reach approximately 200 feet upstream from the weir. Direct measurements could be made for low flows. Higher flows could be made by wading. Caution is recommended when walking near the weir during flow events.

POINT OF ZERO FLOW – The PZF is near the center of the channel and is approximately 0.0 feet gage height, levels of April 15, 2010.

FLOODS – A peak recorded flow of 2,182 cfs and 5.18 feet gage height occurred on August 3, 2005. Higher flows have possibly occurred prior to gage installation.

REGULATION – Numerous aesthetic lakes in the project capture and hold water, particularly low flows. However, once full, water will flow unimpeded.

DIVERSIONS – None known

ACCURACY – Good

JUSTIFICAITON – Monitor flows in the low flow channel of Indian Bend Wash as part of the Scottsdale Flood Warning System.

UPDATE - July 19, 2011
D.E. Gardner